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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,689	12/10/2004	Nora Brambilla	DE 020157	3098
24737	7590	06/14/2006	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			LE, TUNG X	
			ART UNIT	PAPER NUMBER
			2821	

DATE MAILED: 06/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

**Office Action Summary**

Application No.

10/517,689

Applicant(s)

BRAMBILLA ET AL.

Examiner

Tung X. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on amendment received 05/22/2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

  
Hoanganh Le  
Primary Examiner

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. The amendment filed on May 22, 2006 is acknowledged.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Rosenberg et al. (U.S. 2006/0109183 A1).

With respect to claim 1, Rosenberg discloses in figure 2 an antenna (18) having a dielectric substrate (a dielectric material built on PCB [38], see paragraph [0040]) having two larger end faces (one top face and one bottom face) and four smaller end faces (four side faces of antenna [18]) and two resonant printed wiring structures (a first one includes [20,26,30,32] and a second one includes [22,28,34,36]) for use in high-frequency and microwave range (see paragraph [0053]), a first printed wiring structure (20,26,30,32) being arranged on one end face (on left side of the antenna [18]) of the substrate along a first edge and a second printed wiring structure (22,28,34,36) on an opposite (on the right side of the antenna [18]), second edge of the same end face (see figures 2-5), wherein each of the first and second printed wiring structures includes a first printed wire (32) on the end face extending from a first one of the side faces to a

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second one of the side faces along one of the edges of the end face (see figure 2), a second printed wire (30) disposed on the end face in parallel to and spaced apart from the first printed wire (see figure 2), and also extending from the first side face to the second side face (see figure 2), and a third printed wire (26) disposed on the end face extending between the first printed wire and the second printed wire perpendicularly to the first and second printed wires to connect the first printed wire to the second printed wire (see figure 2).

With respect to claim 2, Rosenberg discloses that the second printed wiring structure (30) being equal to the first printed wiring structure (32) as regards shape and size (see figure 2).

With respect to claim 3, Rosenberg discloses that the substrate (a dielectric material built on PCB [38], see paragraph [0040]) is in essence rectangular (see paragraph [0055]) having two larger end faces (one top face and one bottom face) and four smaller end faces (four side faces of antenna [18]) and in that the first and second printed structures (a first one includes [20,26,30,32] and a second one includes [22,28,34,36]) being deposited on a first end face and stretch out from a first to a second, opposite side face along the edge (see figure 2).

With respect to claim 4, Rosenberg discloses that the first and second printed wiring structures have the form of a rectangular face (see figure 2).

With respect to claim 5, Rosenberg discloses in figure 2 an antenna (18) having a dielectric substrate (a dielectric material built on PCB [38], see paragraph [0040]) and two resonant printed wiring structures (a first one includes [20,26,30,32] and a second

one includes [22,28,34,36]) for use in high frequency and microwave range (see paragraph [0053]), a first printed wiring structure (20,26,30,32) being arranged on one end face (on left end face side of the antenna [18]) of the substrate along a first edge and a second printed wiring structure (22,28,34,36) on an opposite (on right end face side of the antenna [18]), second edge of the same face (see figure 2), wherein the substrate is in essence rectangular (see paragraph [0055]) having two larger end faces (one top face and one bottom face) and four smaller end faces (left, right, front, back faces of the antenna [18]) and in that the first and second printed wiring structures are deposited on a first end face and stretch out from a first to a second, opposite side face along the edge (figure 2), and wherein each printed wiring structure is subdivided into three printed wires where a first printed wire (32) stretches out from the first to the second side face along the edge, a second printed wire (30) stretches out from the second to the first end face, and a third printed wire (26) is connected to the first printed wire and the first printed wire is connected to the second printed wire (see figure 2).

With respect to claim 6, Rosenberg discloses in figure 2 that a fourth printed wire (20) is connected to the second printed wire (30).

With respect to claim 7, Rosenberg discloses that the first and second printed wires (30,32) are equally long (see figure 2).

With respect to claim 8, Rosenberg discloses the third and fourth printed wires are equally long (see figure 2).

With respect to claim 9, Rosenberg discloses in figure 2 that the first and second printed wires (30,32) are longer than the third and fourth printed wires (20,26).

With respect to claim 10, Rosenberg discloses in figure 2 that the fourth printed wire [20] runs along an edge of the first end face (on back side face of the antenna [18]).

With respect to claim 11, Rosenberg discloses in figure 2 that the first and third printed wires (32,26) are arranged perpendicular to the second and fourth printed wires (20,30).

With respect to claim 12, Rosenberg discloses that the second printed wiring structures (22,28,34,36) are mirrored on the first end face (see figure 2).

With respect to claim 13, Rosenberg discloses that a printed wiring board (38) on which an antenna (18) as defined is arranged (see figure 2).

With respect to claim 14, Rosenberg discloses a radio communication device using for the GPS, DCS/PCS, UMTS and Bluetooth domain characterized by an antenna (see paragraph [0054]).

With respect to claim 15, Rosenberg discloses that each of the first and second printed wiring structures further includes a fourth printed wire (20,22) disposed on the one end face (back end side face of the antenna [18]), and being connected to one of the first and second printed wires and not connected to the other of the first and second wires (see figure 2).

With respect to claim 16, Rosenberg discloses in figure 2 a printed circuit board assembly comprising a printed circuit board (38), and an antenna (18) mounted on the printed circuit board, the antenna including a dielectric substrate (a dielectric material built on PCB [38], see paragraph [0040]) having two larger end faces (one top face and

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one bottom face) and four smaller end faces (four side faces of left, right, front, and back side faces of the antenna [18]) and two resonant printed wiring structures (a first one includes [20,26,30,32] and a second one includes [22,28,34,36]), adapted for use in high frequency and microwave range (see paragraph [0053]), a first printed wiring structure (20,26,30,32) being arranged on one end face of the substrate along a first edge and a second printed wiring structure (22,28,34,36) on an opposite, second edge of the same end face (figure 2), wherein each of the first and second printed wiring structures includes, a first printed wire (32) disposed on the one end face extending from a first one of the side faces to a second one of the side faces along one of the edge of the end face (see figure 2), a second printed wire (30) disposed on the one end face in parallel to and spaced apart from the first printed wire, and also extending from the first side face to the second side face (figure 2), and a third printed wire (26) disposed on the one end face extending between the first printed wire and the second printed wire perpendicularly to the first and second printed wires to connect the first printed wire to the second printed wire (see figure 2).

With respect to claim 17, Rosenberg discloses that the first and second printed wiring structures (a first one includes [20,26,30,32] and a second one includes [22,28,34,36]) comprises silver paste (inherently), and wherein the antenna is mounted on the printed circuit board (38) such that the one end face of the antenna on which are disposed the first and second printed structures is disposed directly on and immediately adjacent to the printed wiring board (see figure 2).

With respect to claim 18, Rosenberg discloses that each of the first and second printed wiring structures further includes a fourth printed wire (20) disposed on the one end face (on the back face of the antenna [18]), and being connected to one of the first and second printed wires and not connected to the other of the first and second wires (see figure 2).

#### ***Citation of Relevant Prior Art***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shamir et al. (U.S. 2004/0135726 A1) discloses a method for designing a small antenna matched to an input impedance, and small antennas designed according to the method.

Jiang et al. (U.S. 2002/0027527 A1) discloses a high gain printed loop antenna.

#### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within



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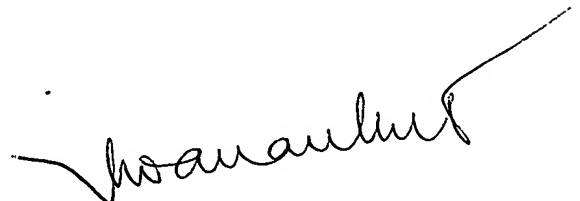
TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung X. Le whose telephone number is 571-272-6010. The examiner can normally be reached on 8:30 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner  
Tung Le  
AU 2821



Hoanganh Le  
Primary Examiner